TEXAS MATH SOLUTION

Grade 6

Module 1
Assessments

Student Edition

End of Topic Assessment

**Name** _____ **Date** _____

1. Which expression is **NOT** equivalent to the sum 48 + 72?

   a. 8(6 + 9)

   b. 12(4 + 8)

   c. 5(6 + 18)

   d. 4(12 + 18)

2. Which pair of numbers is relatively prime?

   a. 15 and 25

   b. 29 and 58

   c. 40 and 63

   d. 54 and 99

2. What is the prime factorization of 78?

   a. 3 · 26

   b. 5 · 16

   c. 2 · 3 · 13

   d. 2 · 2 · 2 · 2 · 5

4. Which expression is **NOT** equivalent to 75(12 + 16)?

   a. 300(3 + 4)

   b. 25(36 + 48)

   c. 150(6 + 8)

   d. 150(3 + 4)

5. What is the prime factorization of 90?

    a. $9 \cdot 10$

    b. $3 \cdot 3 \cdot 10$

    c. $2 \cdot 3 \cdot 5$

    d. $2 \cdot 3^2 \cdot 5$

6. Jennifer is making bouquets of flowers. She has 25 roses, 45 tulips, and 15 snapdragons. Which expression is equivalent to the total number of flowers Jennifer is using to make bouquets?

    a. $5(5 + 9) + 3$

    b. $5(5 + 9 + 3)$

    c. $25 + 3(9 + 5)$

    d. $25 + 5(9 + 5)$

7. Which statement shows a sum rewritten in the form $a(b + c)$ such that the integers b and c have no common factor?

    a. $99 + 66 = 11(9 + 6)$

    b. $25 + 15 = 5(5 + 3)$

    c. $12 + 16 = 2(6 + 8)$

    d. $46 + 92 = 23(2 + 4)$

8. Which expression could Fatima use to model and evaluate the area of the large rectangle?

7 yd

3 yd

9 yd
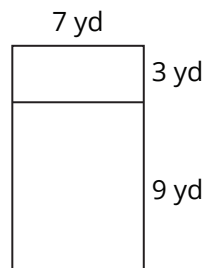
    a. $7(3 + 9)$

    b. $7(3) + 9$

    c. $9(3 + 7)$

    d. $3(7 \cdot 9)$

9. Ezekiel decomposed the rectangle shown into three smaller rectangles. Then he demonstrated the Distributive Property by modeling the area of the entire rectangle in terms of the three smaller rectangles. Which equation could Ezekiel have used?
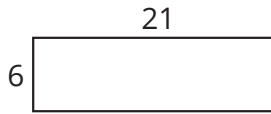
a. 6(6 + 12 + 3) = 6(6) + 6(12) + 6(3)

b. 6(10 + 10 + 11) = 6(10) + 6(10) + 6(11)

c. 21(3 + 3) = 21(3) + 21(3)

d. 21(3 + 2 + 3) = 21(3) + 21(2) + 21(3)

10. What is the prime factorization of 80?

a. $3 \cdot 26$

b. $5 \cdot 16$

c. $2 \cdot 2 \cdot 2 \cdot 5$

d. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 5$

11. Rosalie wrote an expression that is equivalent to (45 + 15) ÷ 12. Which expression could be the one that Rosalie wrote?

a. $60 \div 3 \cdot 4$

b. $(2 \cdot 2 \cdot 3 \cdot 5) \div 4 \cdot 3$

c. $9 \cdot 5 + 3 \cdot 5 \div 3 \cdot 2 \cdot 2$

d. $(2 \cdot 2 \cdot 3 \cdot 5) \div (2 \cdot 2 \cdot 3)$

12. Mrs. Roman showed students part of the prime factorization of 280. One factor is missing.

$2^3 \cdot 5 \cdot$ _____

Which number completes this prime factorization?

a. 2

b. 3

c. 5

d. 7

13. Which statement shows the correct prime factorization for the number provided?

    a. $100 = 2 \cdot 5^2$

    b. $60 = 3 \cdot 4 \cdot 5$

    c. $48 = 2^3 \cdot 3$

    d. $36 = 2^2 \cdot 3^2$

14. Which expression is equivalent to the sum 36 + 72?

    a. 18(2 + 3)

    b. 9(4 + 8)

    c. 3(10 + 24)

    d. 2(18 + 27)

End of Topic Assessment

Name _____ **Date** _____

1. The shaded squares in the figure shown represent $\frac{9}{16}$ of the whole figure. Which statement best describes the fraction?
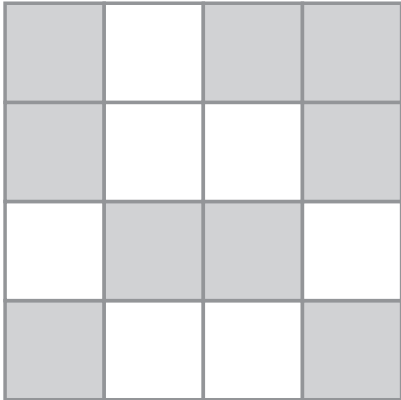
a. It is exactly $\frac{1}{2}$.

b. It is close to, but less than, $\frac{1}{2}$.

c. It is close to, but greater than, $\frac{1}{2}$.

d. It is not close to $\frac{1}{2}$.

2. Tamara is making a large omelet and needs $\frac{1}{2}$ cup of chopped tomatoes. She only has a $\frac{1}{8}$ - cup measuring cup. How many times should Tamara fill this measuring cup for the tomatoes?

a. 4

b. 1

c. 2

d. 8

3. The heights, in meters, of a collection of plants are shown in the table.

Plant	Height (in meters)
A	$\frac{3}{2}$
B	$1\frac{1}{8}$
C	$\frac{3}{5}$
D	1
E	$\frac{4}{9}$

Which of the following lists the heights of the plants in order from least to greatest?

a. Plant C, Plant E, Plant A, Plant D, Plant B

b. Plant E, Plant C, Plant D, Plant B, Plant A

c. Plant C, Plant A, Plant E, Plant D, Plant B

d. Plant E, Plant C, Plant D, Plant A, Plant B

4. What is the value of $2\frac{3}{4} \times 5\frac{1}{3}$?

a. $14\frac{2}{3}$
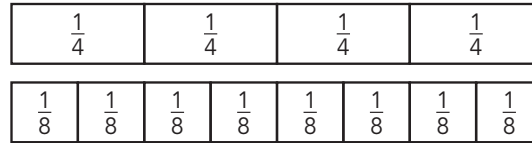
b. $10\frac{1}{4}$

c. 18

d. $7\frac{1}{4}$

5. Mr. Gauss asked Jenna and Jason to calculate the product $3\frac{2}{3} \times 5\frac{1}{4}$. Jenna calculated $\frac{231}{12}$ as the product, and Jason calculated $\frac{77}{4}$ as the product. Who calculated the correct answer?

   a. Both Jenna and Jason calculated the correct answer.

   b. Jason calculated the only correct answer.

   c. Jenna calculated the only correct answer.

   d. Neither Jenna nor Jason calculated the correct answer.

6. Ms. Gooden feeds stray cats in the park every evening. She never knows how many cats will come to be fed. The food is always shared equally among the cats that are at the park. One evening, when 6 cups of cat food were shared, each cat received $\frac{2}{3}$ cup of cat food. How many cats were fed that evening?

   a. 18 cats

   b. 4 cats

   c. 6 cats

   d. 9 cats

7. After Esayas's birthday party, $\frac{3}{4}$ of a pizza remained. Esayas wants to share the remaining pizza equally with 5 of his friends. What fraction of a pizza will Esayas and each of his friends receive?

   a. $\frac{3}{20}$

   b. $4\frac{1}{4}$

   c. $3\frac{3}{4}$

   d. $\frac{1}{8}$

8. Ms. Dehejia has 25 sheets of colored paper. She wants to use the paper to create flyers announcing a recycling drive. She will use $\frac{1}{4}$ sheet of paper for each flyer. How many flyers can Ms. Dehejia make?

   a. 10 flyers

   b. $\frac{4}{25}$ flyer

   c. $6\frac{1}{4}$ flyers

   d. 100 flyers

9. Georgianne plans to build a wooden tower for a school art display, using various kinds of wood blocks. The tower will be 2 yards tall. Each block is $\frac{1}{8}$ yard tall. How many blocks will Georgianne need for her tower? Use the model to help you solve the problem.

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├─┼─┼─┼─┼─┼─┼─┼─┼─┼─┼─┼─┼─┼─┼─┼─┤
0               1               2
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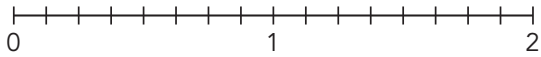
    a. 16

    b. 10

    c. $2\frac{1}{8}$

    d. $1\frac{7}{8}$

10. Alfredo is making dinner for himself and some friends. He has $\frac{7}{8}$ cup of sauce for one of the dishes. If each serving requires $\frac{1}{4}$ cup of sauce, how many servings can Alfredo make in all? Use the model to help you solve the problem.

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

    a. 4

    b. 2

    c. $3\frac{1}{2}$

    d. 12

11. Sherril bought $9\frac{1}{2}$ pounds of plant food. She will give each of the plants in her nursery $\frac{1}{9}$ pound of plant food. There are 85 plants in Sherril's nursery. Which statement is true?

    a. Sherril has more food than she needs for all the plants. She will have 1 portion left over.

    b. Sherril has more food than she needs for all the plants. She will have $\frac{1}{2}$ portion left over.

    c. Sherril has just enough food for all the plants.

    d. Sherril does not have enough food for all the plants. She needs another $\frac{1}{2}$ pound of food.

12. Setsuko has $\frac{9}{10}$ yard of colored ribbon. She plans to cut the ribbon into pieces. Each piece will be $\frac{1}{6}$ yard long. How many whole pieces can Setsuko make from the ribbon?

    a. 6

    b. 5

    c. 4

    d. 3

13. An arts supply store has 28 pounds of modeling clay to ship to a client. Each packing box can contain no more than $\frac{3}{4}$ pound of modeling clay. Which statement is true?

    a. The store will need exactly 38 boxes for the shipment, with $\frac{1}{4}$ pound of clay going into the last box.

    b. The store will need exactly 21 boxes for the shipment.

    c. The store will need exactly 37 boxes for the shipment.

    d. The store will need exactly 38 boxes for the shipment, with $\frac{1}{3}$ pound of clay going into the last box.

14. Which number is a positive rational number?

   a. $\frac{0}{7}$

   b. $\frac{1}{10}$

   c. 0

   d. −8

15. Mr. Sams asked his class to order these fractions from greatest to least.

$$\frac{10}{11}, \frac{2}{9}, \frac{7}{15}$$

Which statement is true?

   a. The least fraction is $\frac{7}{15}$ since its value is close to 0.
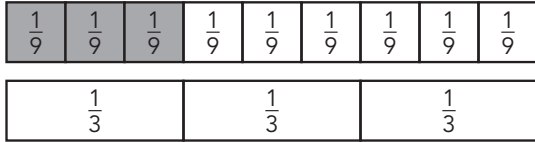
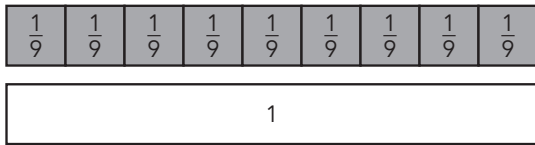   **b.** The least fraction is $\frac{2}{9}$ since its value is close to 0.

   c. The middle fraction is $\frac{10}{11}$ since its value is close to $\frac{1}{2}$.

   d. The greatest fraction is $\frac{2}{9}$ since its value is close to 1.

16. Jamal made $\frac{1}{3}$ gallon of lemonade. He plans to pour servings of $\frac{1}{9}$ gallon and wants to know how many servings he will have. Which model correctly represents this situation?

a.

$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$

b.

$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$

1

c.

0   1
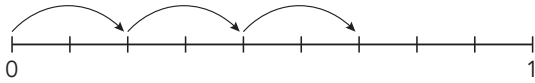
d. none of the above

17. Which statement about $\frac{2}{3}$ multiplied by $\frac{1}{4}$ must be true?

a. The product is greater than 1.

b. The product is between $\frac{1}{4}$ and $\frac{2}{3}$.

c. The product is less than $\frac{1}{4}$.

d. The product is greater than $\frac{2}{3}$.

18. Which set of fractions is in order from least to greatest?

a. $\frac{3}{8}, \frac{5}{6}, \frac{7}{16}, \frac{11}{20}$

b. $\frac{3}{8}, \frac{7}{16}, \frac{11}{20}, \frac{5}{6}$

c. $\frac{5}{6}, \frac{3}{8}, \frac{7}{16}, \frac{11}{20}$

d. $\frac{11}{20}, \frac{7}{16}, \frac{5}{6}, \frac{3}{8}$

19. Which statement about 8 multiplied by $\frac{1}{3}$ must be true?

    a. The product is greater than 8.

    b. The product is between $\frac{1}{3}$ and 8.

    c. The product is less than $\frac{1}{3}$.

    d. The product is between 7 and 8.

20. Kirsten created a wood sculpture that used $7\frac{1}{2}$ pieces of wood that were $\frac{3}{4}$-foot long each. If she had a total of 8 feet of wood when she started the sculpture, how much wood does she have left over after completing her sculpture?

    a. $\frac{1}{2}$ ft

    b. $5\frac{5}{8}$ ft

    c. 2 ft

    d. $2\frac{3}{8}$ ft

End of Topic Assessment

Name _____   **Date** _____

1. What is the area of the parallelogram shown?
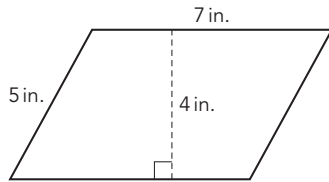
   a. 28 square inches

   b. 35 square inches

   c. 24 square inches

   d. 20 square inches

2. What is the area of the triangle shown?
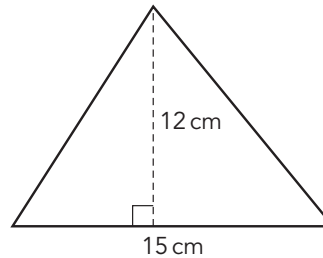
   a. 360 square centimeters

   b. 180 square centimeters

   c. 90 square centimeters

   d. 45 square centimeters

3. What is the area of trapezoid *EFGH*?
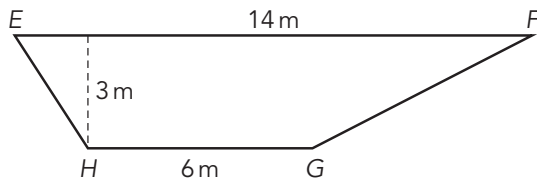
   a. 30 square meters

   b. 42 square meters

   c. 60 square meters

   d. 84 square meters

4. The lengths of two sides of a triangle are 3 cm and 7 cm. What can you conclude about the maximum length of the third side of the triangle?

   a. The maximum length of the third side must equal 10 cm.

   b. The maximum length of the third side must be greater than 10 cm.

   c. The maximum length of the third side must be less than 10 cm.

   d. The maximum length of the third side must equal 4 cm.

5. Which set of side measurements could be a triangle?

    a. 2 miles, 3 miles, 4 miles

    b. 20 ft, 20 ft, 50 ft

    c. 1.3 cm, 4.3 cm, 8.3 cm

    d. 12 yd, 24 yd, 64 yd

6. Which lists the side lengths of the triangle in order from shortest to longest?
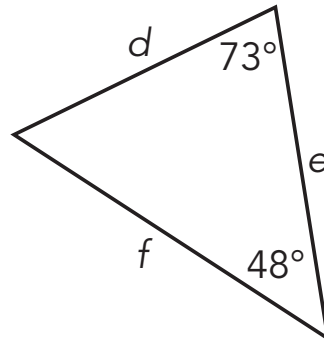
    a. *d, e, f*

    b. *d, f, e*

    c. *f, d, e*

    d. *f, e, d*

7. A triangle has angle measures 23° and 35°. What is the measure of the third angle?

    a. 32°

    b. 90°

    c. 122°

    d. 180°

8. Which lists the angles of the triangle in order from smallest to largest?
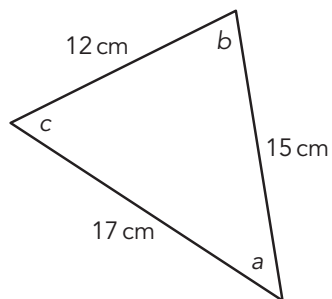
    a. *b, c, a*

    b. *c, b, a*

    c. *a, c, b*

    d. *a, b, c*

9. Gary is comparing four geometric solids. Which solid has the greatest volume?

a.

$\frac{1}{3}$ in.

$\frac{1}{2}$ in.

$1\frac{1}{2}$ in.

b.

$\frac{1}{3}$ in.

$\frac{1}{3}$ in.

$1\frac{1}{2}$ in.

c.

$\frac{1}{2}$ in.

1 in.

$1\frac{3}{4}$ in.

d.

$\frac{1}{2}$ in.

$\frac{1}{3}$ in.

$1\frac{3}{4}$ in.
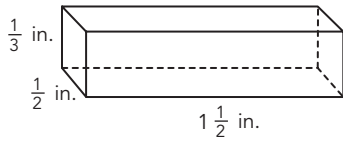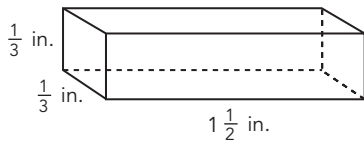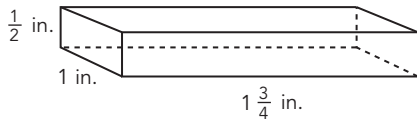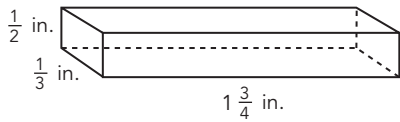
10. One of Mollie's favorite toys is a set of hollow rectangular plastic blocks that can be filled with water to use as bath toys. The red block has dimensions $4\frac{1}{4}$ inches by $6\frac{1}{4}$ inches by $5\frac{1}{4}$ inches. Which represents the volume of the red block?

    a. 30 cubic inches

    b. $2,231\frac{1}{4}$ cubic inches

    c. $139\frac{29}{64}$ cubic inches

    d. 557 cubic inches

11. Which set of measures could **NOT** be angle measures of a triangle?

    a. 55°, 55°, 71°

    b. 2°, 2°, 176°

    c. 11.9°, 19.1°, 149°

    d. 58°, 63°, 59°

12. The length of three line segments are provided.

- Measure of segment A is $3\frac{1}{4}$ inches
- Measure of segment B is $2\frac{2}{3}$ inches
- Measure of segment C is $5\frac{11}{12}$ inches

Which statement is true about these three line segments?

a. These line segments can form a triangle because each side of the triangle can a different length.

b. These line segments can form a triangle because the longest side of the triangle can be exactly $5\frac{11}{12}$ inches.

c. These line segments cannot form a triangle because at least two sides of the triangle must be the same length.

d. These line segments cannot form a triangle because the longest side of the triangle must be shorter than $5\frac{11}{12}$ inches.

13. Which of the following can be used to calculate the area of a square tile that measures 10 cm on each side?

a. A = (10 cm)(10 cm)

b. A = $\frac{1}{2}$ (10 cm)(10 cm)

c. A = 2 (10 cm)(10 cm)
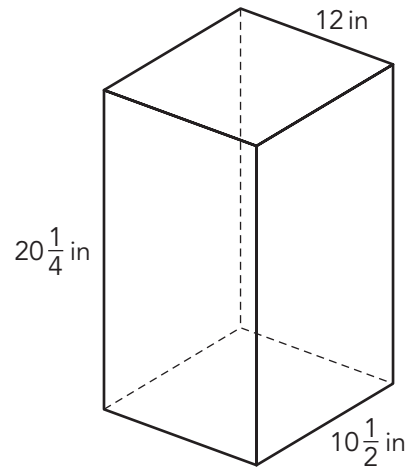
d. A = (10 cm) + (10 cm) + (10 cm) + (10 cm)

14. Ms. Chen will paint a triangular tile. An image of the tile is shown.
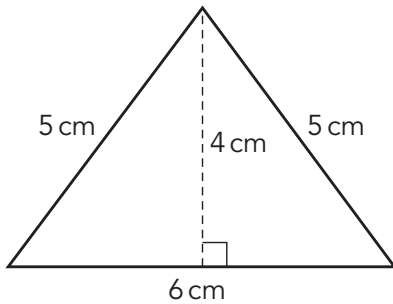
Which of the following can be used to calculate the area of the triangular tile?

  a. A = (6 cm)(4 cm)

  b. A = (6 cm)(5 cm)

  c. A = $\frac{1}{2}$ (6 cm)(4 cm)

  d. A = $\frac{1}{2}$ (6 cm)(5 cm)

15. The figure represents an aquarium in the shape of the rectangular prism. The dimensions of the aquarium are given in inches.

What is the volume of water in the aquarium in cubic inches when the aquarium is full?

  a. $42\frac{3}{4}$ in³

  b. $2{,}541\frac{1}{2}$ in³

 **c.** $2{,}551\frac{1}{2}$ in³

  d. $2{,}561\frac{1}{2}$ in³

16. The planning committee submitted a plan to the town architect to revitalize the town square. Their plan includes a new flagpole with a concrete base in the shape of a trapezoid. The base of the trapezoid and its dimensions are shown.
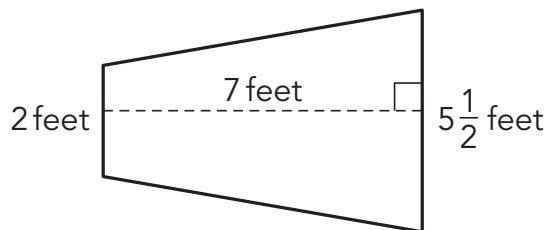
What is the area of the concrete base proposed by the planning committee in square feet?

a. $14\frac{1}{2}$ ft²

b. $26\frac{1}{4}$ ft²

c. $26\frac{1}{2}$ ft²

d. $26\frac{3}{4}$ ft²

17. Which lists the side lengths of the triangle in order from longest to shortest?
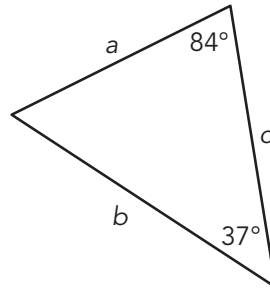
a. *a, c, b*

b. *b, c, a*

c. *a, b, c*

d. *c, b, a*

End of Topic Assessment

Name _____ **Date** _____

1. What is the product 4.5 × 2.004?

    a. 0.9018

    b. 9.018

    c. 90.18

    d. 901.8

2. What is the quotient 45.708 ÷ 8.79?

    a. 0.052

    b. 0.52

    c. 5.2

    d. 52

3. Mrs. Wallace bought 0.75 pound of sliced turkey for $3.45 and 1.5 pounds of sliced ham for $6.60. How much more was the turkey per pound than the ham?

    a. $0.20

    b. $1.20

    c. $3.15

    d. $9.00

4. Which correctly places the decimal point in the quotient to make the division sentence true?
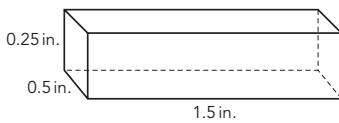
$8.94 \div 0.016 = 55875$

  a. 0.55875

  b. 5.5875

  c. 55.875

  d. 558.75

5. A rectangle has an area of 90 square centimeters and a height of 12.5 centimeters. What is the length of the base?
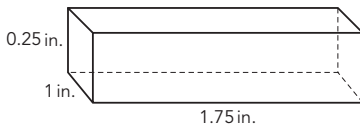
  a. 7.2 centimeters

  b. 72 centimeters

  c. 112.5 centimeters

  d. 1125 centimeters

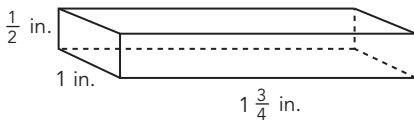**6.** Gary is comparing four geometric solids. Which solid has the greatest volume?
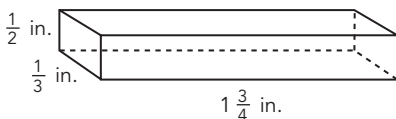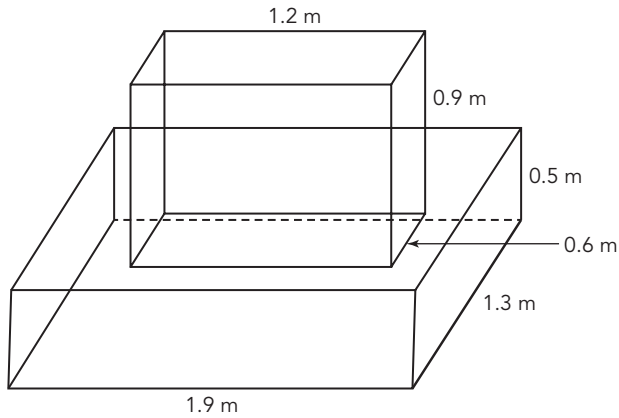
a.

0.25 in.
0.5 in.
1.5 in.

b.

0.25 in.
1 in.
1.75 in.

c.

$\frac{1}{2}$ in.
1 in.
$1\frac{3}{4}$ in.

d.

$\frac{1}{2}$ in.
$\frac{1}{3}$ in.
$1\frac{3}{4}$ in.

7. What is the volume of both rectangular prisms combined?

1.2 m
0.9 m
0.5 m
0.6 m
1.3 m
1.9 m

a. 0.587 cubic meters

b. 1.883 cubic meters

c. 2.7 cubic meters

d. 6.4 cubic meters

8. You want to mail a rectangular gift box that has a volume of 95 cubic inches. You need enough packing material to fill the entire box. The packing material costs $0.012 per cubic inch. About how much does it cost to buy enough packing material to fill the entire box?

a. $1.08

b. $1.14

c. $11.20

d. $11.40

9. Which number best represents the location of point *E* on the number line below?
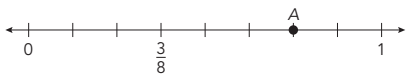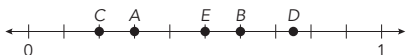

a. 0.5

b. 0.625

c. 0.75

d. 0.875

10. Which number line has the given points located correctly?

$A = \frac{1}{4}$, $B = 0.05$, $C = \frac{3}{10}$, $D = 0.75$, $E = \frac{3}{5}$

a.

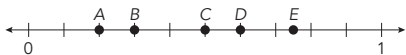**b.**
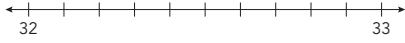

c.

d.

11. Ronald correctly labeled the numbers 32.6, $32\frac{1}{4}$, 32.98, and $32\frac{4}{5}$ on the number line below.

32   33

Which number was located closest to 32?

a. 32.6

b. $32\frac{1}{4}$

c. 32.98

d. $32\frac{4}{5}$

12. The masses of 4 kittens are shown in kilograms.

$3\frac{4}{5}$ 3.2   3.875 $3\frac{2}{3}$

Which list shows the masses correctly ordered from least to greatest?

a. $3\frac{4}{5}$ 3.2   3.875 $3\frac{2}{3}$

b. $3\frac{2}{3}$ 3.2   3.875 $3\frac{4}{5}$

c. 3.2 $3\frac{4}{5}$ $3\frac{2}{3}$ 3.875

d. 3.2 $3\frac{2}{3}$ $3\frac{4}{5}$ 3.875

13. The heights, in meters, of a collection of plants are shown in the table.

Plant	Height (in meters)
A	$\frac{3}{2}$
B	0.65
C	$\frac{6}{10}$
D	1
E	0.06

Which of the following lists the plants in order from the tallest plant to the shortest plant?

a. A, D, C, B, E

b. A, D, C, B, E

c. A, D, B, C, E

d. A, D, C, B, E

14. The volume of one serving of fruit punch is 3.5 fluid ounces. How many servings are there in 29.75 fluid ounces of fruit punch?

a. 8.25 servings

**b.** 8.5 servings

c. 9.25 servings

d. 9.5 servings

15. At a marathon, Mark is filling each cup with 6.5 fluid ounces of water for the runners. If Mark is pouring the water into the cups from a water cooler that holds 1280.5 fluid ounces of water, how many cups can Mark fill?

   a. 196.5 cups

   b. 197 cups

   c. 197.5 cups

   d. 198 cups

16. A painter took 112.5 hours to complete a task. A second painter will take 2.5 times as long to complete the task. Based on the information, which statement is true?

   a. The task will take the second painter 115 hours to complete, because 112.5 + 2.5 = 115.

   b. The task will take the second painter 120.5 hours to complete, because 112.5 + 2.5 = 120.5.

   c. The task will take the second painter 281.25 hours to complete, because 112.5 × 2.5 = 281.25.

   d. The task will take the second painter 281.25 hours to complete, because 112.5 × 2.5 = 301.25.

17. If the volume of the die is 10.08 cubic centimeters, which is the unknown measure of the die?

? cm

2 cm

2.4 cm
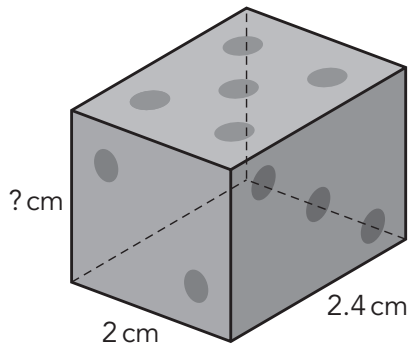
a. 2.1 centimeters

b. 2.15 centimeters

c. 2.2 centimeters

d. 2.25 centimeters

18. The Ohs! Cereal Box is a right rectangular prism with the given dimensions.

4.2 cm

25.2 cm

15.8 cm
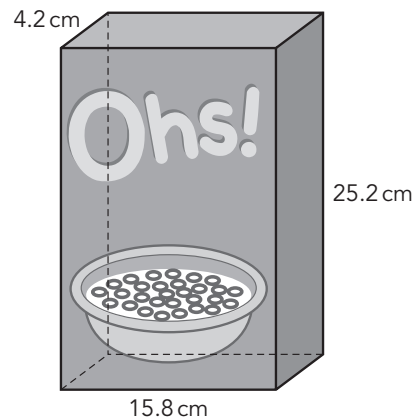
Which is the volume of the cereal box?

a. 45.2 cubic centimeters

b. 1672.272 cubic centimeters

c. 1672.372 cubic centimeters

d. 1672.472 cubic centimeters